



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

DP (10)

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

HM22/0913

RICHARD ARON OSMAN
SCIENCE & TECHNOLOGY LAW GROUP
75 DENISE DRIVE
HILLSBOROUGH CA 94010

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/191,647	11/13/98	021	MCKELVEY, T	1636 09/13/99
First Named Applicant	GOODMAN, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION MODULATING ROBO: LIGAND INTERACTIONS

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
1	B98-031-3	435-007.800	B31 UTILITY	YES	\$605.00	12/13/99

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PATENT AND TRADEMARK OFFICE COPY

Notice of Allowability

Application No.
09/191,647

Applicant(s)
Goodman et al.

Examiner
Terry A. McKelvey

Group Art Unit
1636



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to the response filed 8/30/99.

☒ The allowed claim(s) is/are claims 8-28.

☐ The drawings filed on _____ are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☒ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☐ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☐ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. _____.

☐ including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☒ Interview Summary, PTO-413

☒ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☐ Examiner's Statement of Reasons for Allowance

Application/Control Number: 09/191,647

Art Unit: 1636

Page 2

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Richard Osman on 9/7/99.

The application has been amended as follows:

In the specification:

At page 1, line 4, the following has been inserted:

-- CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Application No. 60/081,057, filed April 7, 1998 and U.S. Provisional Application No. 60/065,544, filed November 14, 1997.

57

Art Unit: 1636

At page 1, line 3, "Inventors: Corey S. Goodman, Thomas Kidd, Katja Brose and Marc Tessier-Lavigne" has been deleted.

At page 1, lines 8-10, including amendment C1, the amendment to page 1, lines 9-10 filed 8/30/99, has been canceled.

In the claims:

At claim 8, line 2, "NO" has been replaced with -- NOS --.

At claim 8, line 3, -- amino acid -- has been inserted between "consecutive" and "residues".

At claim 8, line 3, -- amino acid -- has been inserted between "unboxed" and "residues".

At claim 9, line 2, "NO" has been replaced with -- NOS --.

At claim 9, line 3, -- amino acid -- has been inserted between "consecutive" and "residues".

Art Unit: 1636

At claim 9, line 3, -- amino acid -- has been inserted between "unboxed" and "residues".

At claim 10, line 2, "NO" has been replaced with -- NOS --.

At claim 11, line 2, "NO" has been replaced with -- NOS --.

~~At claim 11, line 3, -- amino acid -- has been inserted between "consecutive" and "residues".~~

~~At claim 11, line 3, -- amino acid -- has been inserted between "unboxed" and "residues".~~

5
12. (Twice amended) An isolated polypeptide according to claim 8 comprising SEQ ID [NO:2-6,] NO:2, 3, 4, 5, or 6, or a subsequence thereof having at least 64 consecutive amino acid residues thereof and comprising one or more unboxed amino acid residues of the corresponding sequence in at least one table selected from the group consisting of Table 1 and Table 2.

~~At claim 13, line 2, -- amino acid -- has been inserted between "consecutive" and "residues".~~

58

Art Unit: 1636

At claim 13, line 3, -- amino acid -- has been inserted between "unboxed" and "residues".

At claim 14, line 2, -- amino acid -- has been inserted between ~~"consecutive"~~ and "residues".

At claim 14, line 3, -- amino acid -- has been inserted between "unboxed" and "residues".

At claim 17, line 3, ~~"NO"~~ has been replaced with -- NOS --.

At claim 17, line 4, -- amino acid -- has been inserted between ~~"consecutive"~~ and "residues".

~~At claim 17, line 4, -- amino acid -- has been inserted between "unboxed" and "residues".~~

~~At claim 18, line 3, "NO" has been replaced with -- NOS --.~~

At claim 18, line 4, -- amino acid -- has been inserted between "consecutive" and ~~"residues"~~.

Art Unit: 1636

At claim 18, line 4, -- amino acid -- has been inserted between "unboxed" and "residues".

At claim 19, line 3, "NO" has been replaced with -- NOS --.

16. (Amended) An isolated polypeptide according to claim 8, comprising at least one sequence selected from the group consisting of SEQ ID NO: [02,] 2, amino acid residues 1-10; SEQ ID NO: [02,] 2, amino acid residues 29-41; SEQ ID NO: [02,] 2, amino acid residues 75-87; SEQ ID NO: [02,] 2, amino acid residues 92-109; SEQ ID NO: [02,] 2, amino acid residues 132-141; SEQ ID NO: [02,] 2, amino acid residues 192-205; SEQ ID NO: [02,] 2, amino acid residues 258-269; SEQ ID NO: [02,] 2, amino acid residues 295-311; SEQ ID NO: [02,] 2, amino acid residues 316-330; SEQ ID NO: [02,] 2, amino acid residues 373-382; SEQ ID NO: [02,] 2, amino acid residues 403-422; SEQ ID NO: [02,] 2, amino acid residues 474-485; SEQ ID NO: [02,] 2, amino acid residues 561-576; SEQ ID NO: [02,] 2, amino acid residues 683-697; SEQ ID NO: [02,] 2, amino acid residues 768-777; SEQ ID NO: [02,] 2, amino acid residues 798-813; SEQ ID NO: [02,] 2, amino acid residues 882-894; SEQ ID NO: [02,] 2, amino acid residues 934-946; SEQ ID NO: [02,] 2, amino acid residues 1054-1067; SEQ ID

59

Art Unit: 1636

D3
NO: [02,] 2, amino acid residues 1181-1192; SEQ ID NO: [02,] 2, amino acid residues 1273-1299; SEQ ID NO: [02,] 2, amino acid residues 1383-1397; SEQ ID NO: [02,] 2, amino acid residues 1468-1477; SEQ ID NO: [02,] 2, amino acid residues 1508-1517.

13
20. (Amended) A method of identifying agents which
D4
modulate the interaction of a Robo polypeptide and a [Robo ligand] Slit polypeptide which consists of the isolated polypeptide according to claim 8, said method comprising the steps of:

combining [a] the Robo polypeptide, [a] the Slit polypeptide [according to claim 8], and a candidate agent under conditions whereby, but for the presence of the agent, the Robo and Slit polypeptides engage in a first interaction, and

determining a second interaction of the Robo and Slit polypeptides in the presence of the agent,

wherein a difference between the first and second interactions indicates that the agent modulates the interaction of the Robo and Slit polypeptides.

60

Art Unit: 1636

14

~~21~~. (Amended) A method of identifying agents which modulate the interaction of a Robo polypeptide and a [Robo ligand] Slit polypeptide which consists of the isolated polypeptide according to claim ²~~9~~, said method comprising the steps of:

combining [a] the Robo polypeptide, [a] the Slit polypeptide [according to claim 9], and a candidate agent under conditions whereby, but for the presence of the agent, the Robo and Slit polypeptides engage in a first interaction, and

determining a second interaction of the Robo and Slit polypeptides in the presence of the agent,

wherein a difference between the first and second interactions indicates that the agent modulates the interaction of the Robo and Slit polypeptides.

15

~~22~~. (Amended) A method of identifying agents which modulate the interaction of a Robo polypeptide and a [Robo ligand] Slit polypeptide which consists of the isolated polypeptide according to claim ⁵~~12~~, said method comprising the steps of:

combining [a] the Robo polypeptide, [a] the Slit polypeptide [according to claim 12], and a candidate agent under conditions

61

Art Unit: 1636

whereby, but for the presence of the agent, the Robo and Slit polypeptides engage in a first interaction, and

determining a second interaction of the Robo and Slit polypeptides in the presence of the agent,

wherein a difference between the first and second interactions indicates that the agent modulates the interaction of the Robo and Slit polypeptides.

16
~~23~~. (Amended) A method of identifying agents which modulate the interaction of a Robo polypeptide and a [Robo ligand] Slit polypeptide which consists of the isolated polypeptide according to claim ⁷~~14~~, said method comprising the steps of:

combining [a] the Robo polypeptide, [a] the Slit polypeptide [according to claim 14], and a candidate agent under conditions whereby, but for the presence of the agent, the Robo and Slit polypeptides engage in a first interaction, and

determining a second interaction of the Robo and Slit polypeptides in the presence of the agent,

wherein a difference between the first and second interactions indicates that the agent modulates the interaction of the Robo and Slit polypeptides.

62

Art Unit: 1636

¹⁷
~~24.~~ (Amended) A method of modulating the interaction of a Robo polypeptide and a [Robo ligand] Slit polypeptide which consists of the isolated polypeptide according to claim ¹~~8~~, said method comprising the steps of

combining [a] the Robo polypeptide, [a] the Slit polypeptide [according to claim 8], and a modulator under conditions whereby, but for the presence of the modulator, the Robo and Slit polypeptides engage in a first interaction, and whereby the Robo and Slit polypeptides engage in a second interaction different from the first interaction.

¹⁸
~~25.~~ (Amended) A method of modulating the interaction of a Robo polypeptide and a [Robo ligand] Slit polypeptide which consists of the isolated polypeptide according to claim ²~~9~~, said method comprising the steps of

combining [a] the Robo polypeptide, [a] the Slit polypeptide [according to claim 9], and a modulator under conditions whereby, but for the presence of the modulator, the Robo and Slit polypeptides engage in a first interaction, and whereby the Robo and Slit polypeptides engage in a second interaction different from the first interaction.

Art Unit: 1636

19

~~26.~~ (Amended) A method of modulating the interaction of a Robo polypeptide and a [Robo ligand] Slit polypeptide which consists of the isolated polypeptide according to claim ⁵~~12~~, said method comprising the steps of

combining [a] the Robo polypeptide, [a] the Slit polypeptide [according to claim 12], and a modulator under conditions whereby, but for the presence of the modulator, the Robo and Slit polypeptides engage in a first interaction, and whereby the Robo and Slit polypeptides engage in a second interaction different from the first interaction.

20

~~27.~~ (Amended) A method of modulating the interaction of a Robo polypeptide and a [Robo ligand] Slit polypeptide which consists of the isolated polypeptide according to claim ⁷~~14~~, said method comprising the steps of

combining [a] the Robo polypeptide, [a] the Slit polypeptide [according to claim 14], and a modulator under conditions whereby, but for the presence of the modulator, the Robo and Slit polypeptides engage in a first interaction, and whereby the Robo and Slit polypeptides engage in a second interaction different from the first interaction.

64

Art Unit: 1636

D4 ²¹
~~28~~. (Amended) A method according to claim ¹⁷~~24~~, wherein the modulator is [deletion mutant] a fragment of the Robo or Slit polypeptide.

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
The claim for the benefit of priority to the two U.S. provisional applications were improperly made under 35 USC 120, not 35 USC 119(e), as required for U.S. provisional applications. A new oath/declaration in which the claim for priority for the two U.S. provisional applications is made under 35 USC 119(e) is required.

Conclusion

Certain papers related to this application may be submitted to Art Unit 1636 by facsimile transmission. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December

65

Art Unit: 1636

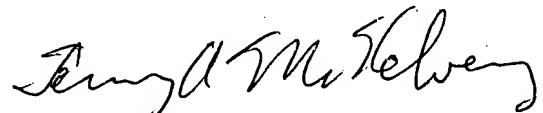
28, 1993) (see 37 C.F.R. § 1.6(d)). The official fax telephone numbers for the Group are (703) 308-4242 and (703) 305-3014.

NOTE: If Applicant does submit a paper by fax, the original signed copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terry A. McKelvey whose telephone number is (703) 305-7213. The examiner can normally be reached on Monday through Friday, except for Wednesdays, from about 6:30 AM to about 5:00 PM. A phone message left at this number will be responded to as soon as possible (usually no later than 24 hours after receipt by the examiner).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. George Elliott, can be reached on (703) 308-4003.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.



Terry A. McKelvey, Ph.D.
Primary Examiner
Art Unit 1636

September 7, 1999